NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **July** YEAR **2011**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **08/17/2011**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐ **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

The month of July was typically hot and humid with scattered showers and thunderstorms most days across some portion of the Hydrologic Service Area (HSA).

The month began with a stationary front across southern portions of the HSA bringing scattered showers and thunderstorms to this area. The front drifted slowly north over the next several days before washing out. Scattered showers and thunderstorms moved northward with the front. By the 4th and 5th, showers and thunderstorms were widespread across the area with some areas receiving from 1.00 to 3.00 inches of rain. From the 6th to the 11th, typically hot and humid conditions prevailed with only isolated to scattered showers throughout the region.

From the 12th to the 15th, showers and thunderstorm activity increased as a "backdoor" cold front pushed in from the northeast on the 15th. The front weakened as it drifted to the southwest. High pressure built in behind the front pushing scattered shower activity to the southernmost portions of the HSA by the 18th. High pressure dominated the Gulf States through the 21st. Scattered afternoon showers and thunderstorms were common throughout this period.

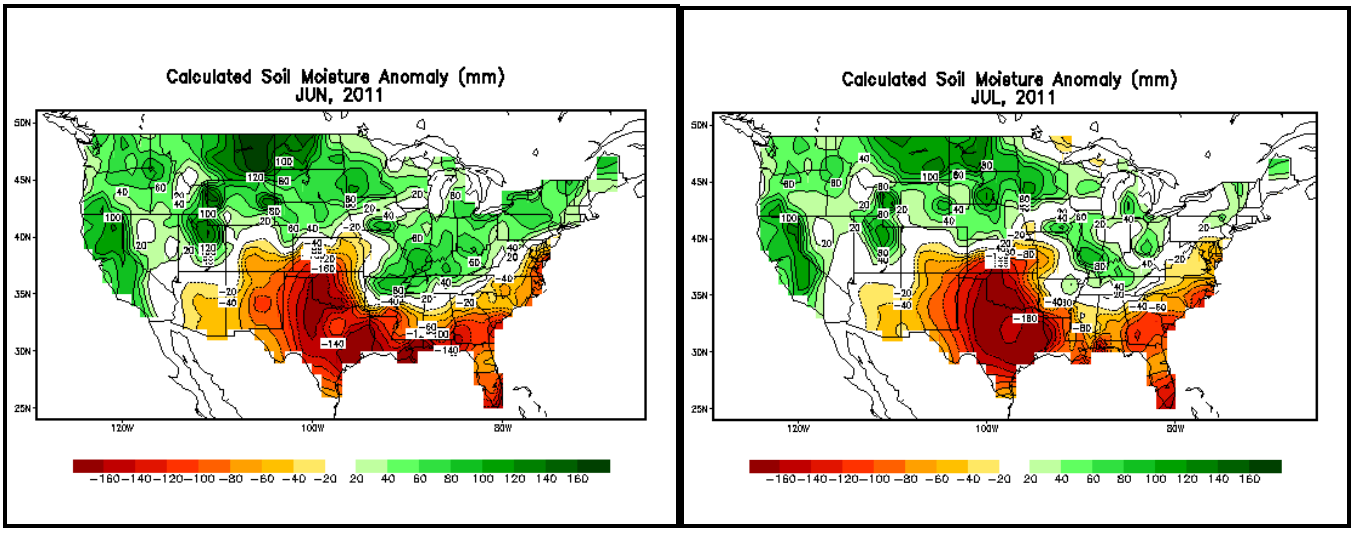
High pressure shifted eastward on the 22nd allowing typical summertime return flow to dominate through the 28th. Hot and humid conditions produced a ripe environment for strong scattered afternoon and evening thunderstorm activity. Some pockets of heavy rainfall occurred during this time period. Some heavier 24 hour totals ending at 7am during this period: 4.60 inches at Okatibbee Reservoir, MS - Lauderdale County(25th); 3.92 inches at Collinsville, MS; 3.47 inches at Goshen Springs, MS (24th); 2.97 inches at Ackerman, MS (25th); 2.55 inches at Okatibbee Reservoir, MS (26th); and 2.35 inches at Collinsville, MS (26th).

High pressure reasserted itself on the 28th. Scattered showers and thunderstorms became more isolated across the region through the end of the month.

River and Soil Conditions...

Some of the wetter areas were across North Central, East, and South Mississippi where rainfall ranged from 75 to 300 percent of normal. Ashley County Arkansas finally got some much needed rainfall. Rainfall ranged from 75 percent to 200 percent of normal. Central Mississippi had a wide range in rainfall where percent of normal rainfall ranged from 50 percent to an excess of 200 percent of normal. Northeast Louisiana had a fairly wide range as well. Rainfall ranged from 50 to 150 percent of normal. The driest area was from Warren County north to Bolivar County along the Mississippi which also includes East Carroll Parish Louisiana and Chicot County Arkansas. Rainfall ranged from 30 percent to near normal. The exception to dryness in this area was a small area of above normal rainfall in Issaquena and Sharkey Counties in Mississippi.

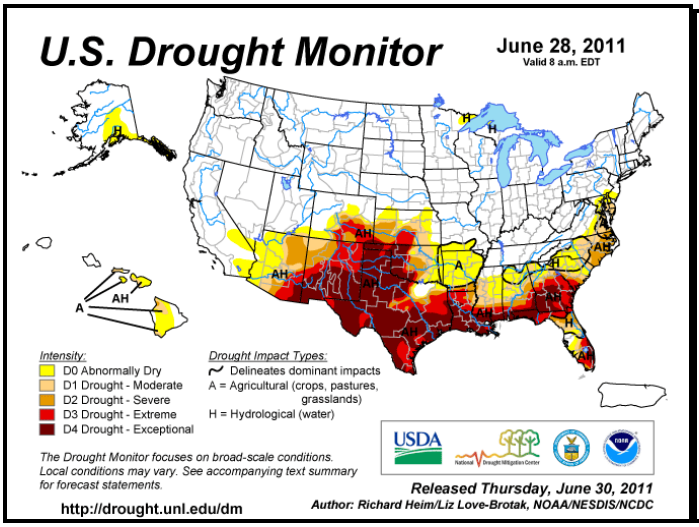
The driest area in the HSA continued to be across Northeast Louisiana, Southeast Arkansas, and West Mississippi where soil moisture deficits ranged from 3.00 to 5.00 inches. South Mississippi saw the greatest improvement. Soil moisture deficits now range from 3.00 to 4.00 inches. Soil moisture deficits across Central and East Mississippi within the HSA ranged from 2.00 to 3.00 inches.



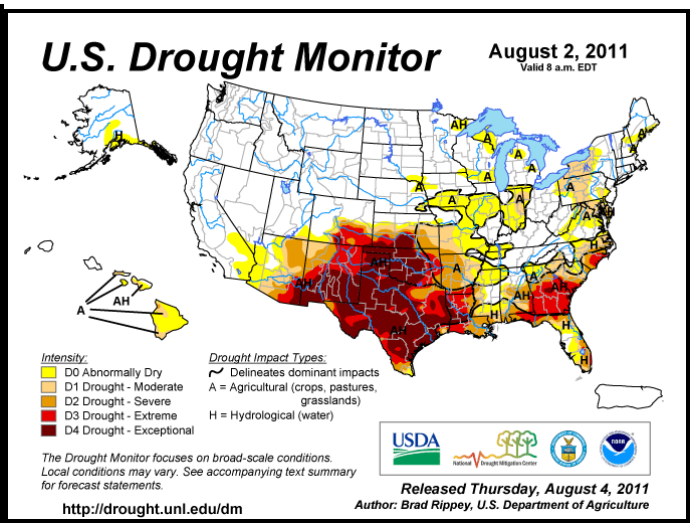
JUNE 2011 **JULY 2011**

Soil Moisture anomaly (departure from normal): (25.4mm = 1 inch)

A comparison of the June 28th U.S. Drought Monitor to the August 2nd U.S. Drought Monitor showed tremendous improvement across South Mississippi where conditions improved to Abnormally Dry (D0). Improvement occurred across Central and East Mississippi to Abnormally Dry (D0) or no drought conditions. Drought conditions remained the same across Northeast Louisiana and portions of West Mississippi. Conditions worsened to Extreme Drought (D3) across Southeast Arkansas and to Severe Drought (D2) across Bolivar and Washington Counties in Mississippi.

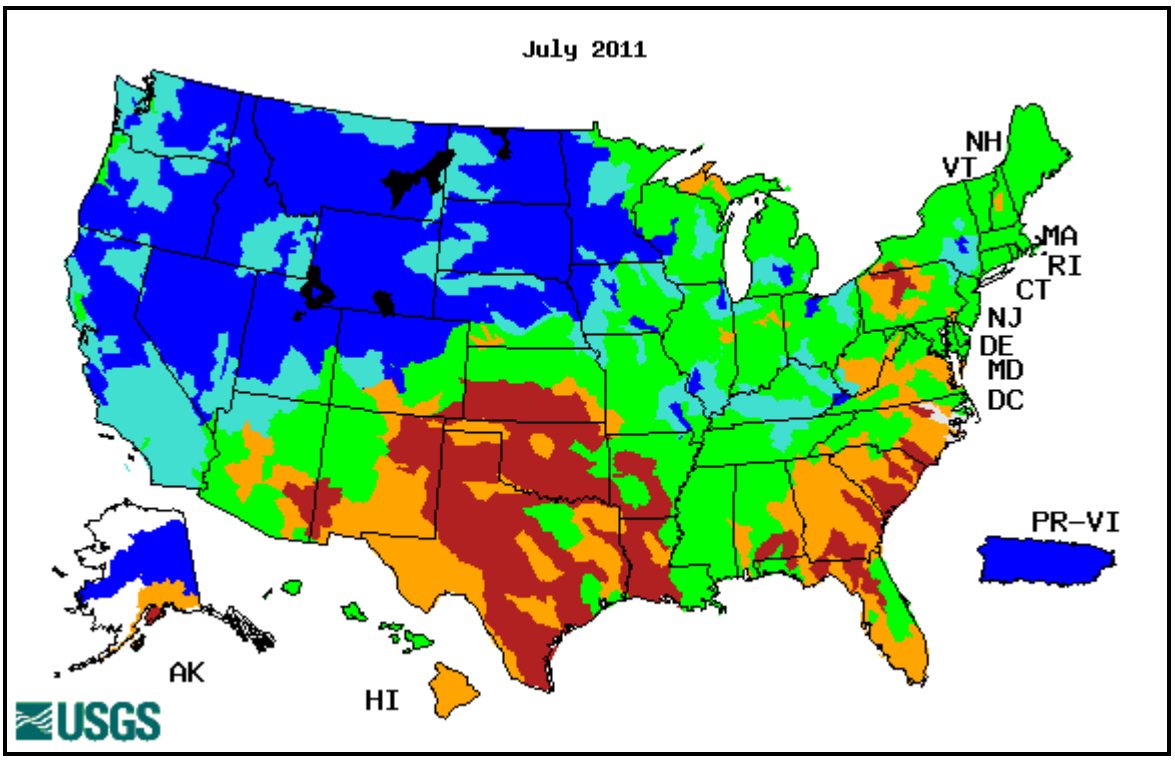


June 28, 2011



August 2, 2011

The United States Geological Survey's (USGS) July 2011 river streamflow records were compared with all historical July streamflow records. Scattered rainfall during the month replenished streamflow across the area. Streamflow is now near normal.



The only flooding during the month occurred along the upper Big Black River. Minor rises were noted along many of the streams during the month.

Soils moisture remains below normal across much of the area. Temperatures are expected to remain above normal with near normal rainfall. Streamflow is near normal across the area.

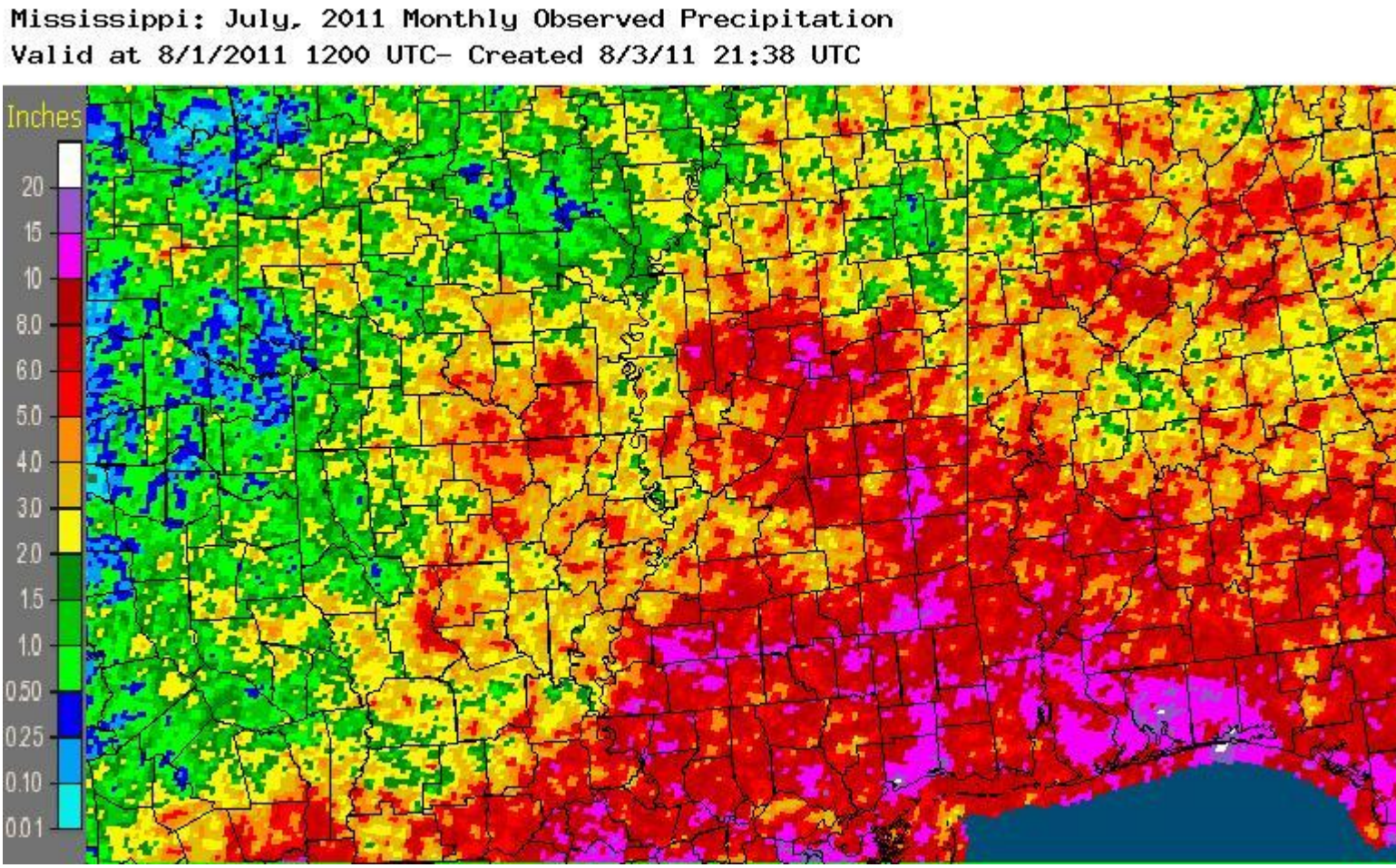
Flood potentials are as follows:

Pearl River System:	Below Normal.
Yazoo River System:	Below Normal.
Big Black River System:	Below Normal.
Homochitto River System:	Below Normal.
Pascagoula River System:	Below Normal.
Northeast LA and Southeast AR:	Below Normal.
Tombigbee River System:	Below Normal.
Mississippi River:	Normal.

Rainfall for the month of July

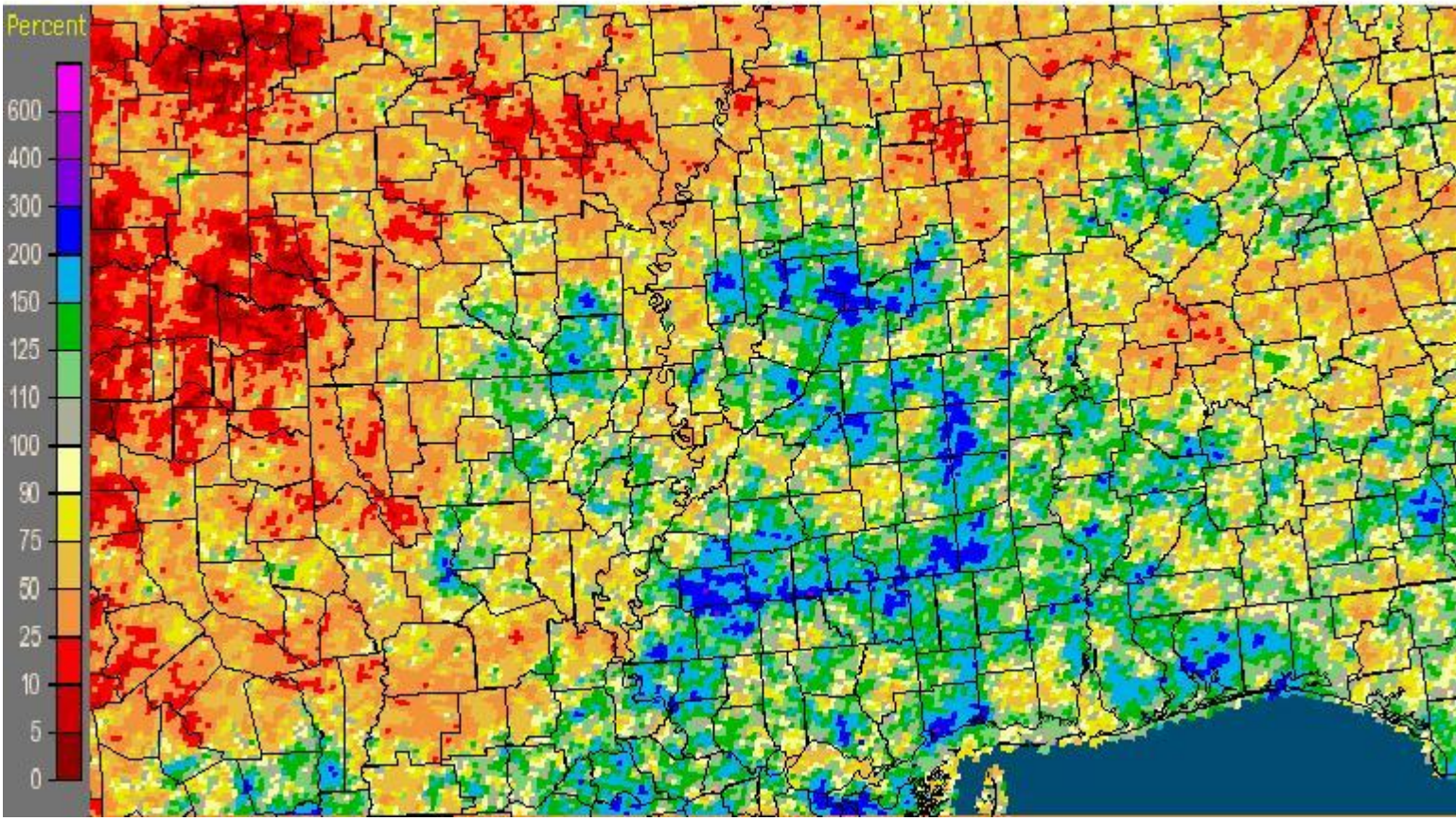
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on June 30th until 7 am on July 31st were: 15.08 inches at Winona, MS; 11.72 inches at Okatibbee Reservoir, MS; 11.61 inches at Purvis, MS; 11.34 inches Collinsville, MS; 10.69 inches at Columbia, MS; 10.36 inches at McCool, MS; 10.02 inches at Hattiesburg, MS; 9.93 inches at Laurel, MS; 9.85 inches at Hazlehurst, MS; 9.78 inches at Canton, MS; 9.30 inches at Union Church, MS; and 9.15 inches at Elliott, MS.

The lowest monthly rainfall totals in the HSA were: 0.81 inches at Lake Providence, LA; 2.11 inches at Satartia, MS; 2.12 inches at Red River Lock/Dam 1, LA; and 2.47 inches at Vicksburg, MS and Rayville, LA.



July 2011 Rainfall Estimates

Mississippi: July, 2011 Monthly Percent of Normal Precipitation
Valid at 8/1/2011 1200 UTC- Created 8/3/11 21:41 UTC



2011 July Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

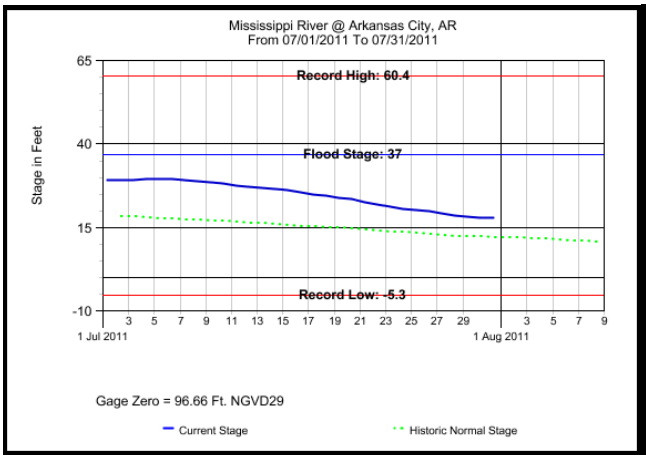
July rainfall for Selected Cities...

City (Airport)	July Rainfall	Departure from normal	2011 Rainfall	2011 Departure from Normal
Jackson, MS	3.31	-1.38	24.79	-10.48
Meridian, MS	9.99	+4.54	35.74	-2.39
Greenwood, MS	4.44	+0.25	22.17	-12.77
Greenville, MS	0.64	-3.31	14.64	-20.39
Hattiesburg, MS	9.20	+3.56	39.32	-4.28
Vicksburg, MS	1.75	-2.17	21.34	-16.03

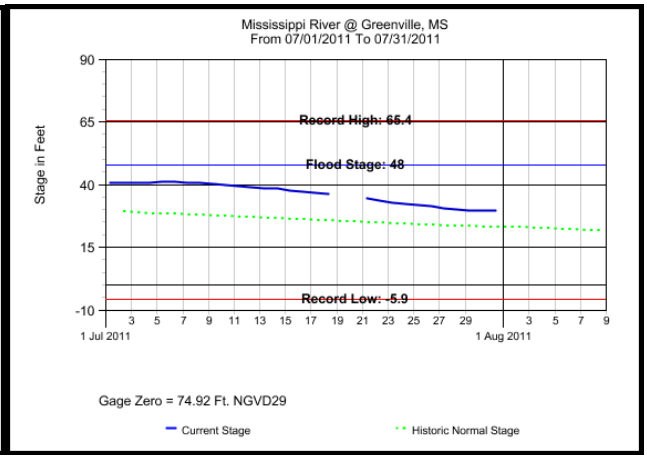
Mississippi River...

Mississippi River Plots for July, 2011

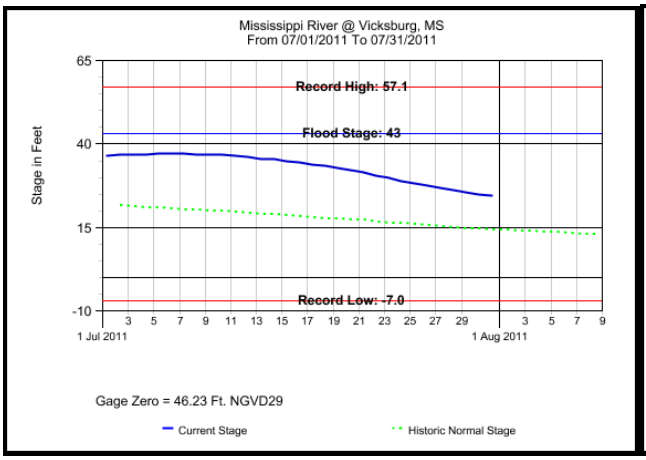
Plots Courtesy of the United States Army Corps of Engineers



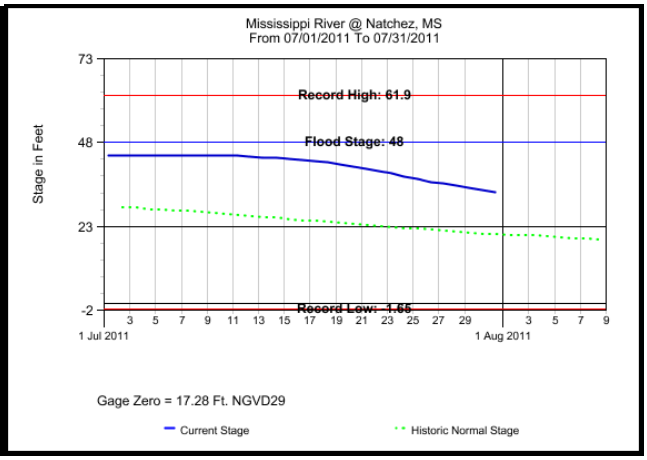
ARKANSAS CITY, MS



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	29.47	07/04/11	17.72	07/31/11
Greenville, MS	48	41.04	07/06/11	29.51	07/31/11
Vicksburg, MS	43	37.17	07/06/11	24.32	07/31/11
Natchez, MS	48	44.30	07/08/11	32.72	07/31/11

Total Flood Warning products issued: 1
Total Flood Statement products issued: 6
Total Flood Advisories MS River : 0
Daily Rainfall Products (RRA'S) issued: 31
Daily River Forecast Products (RVS'S) issued: 31
Daily River Stage products (RVA'S) issued: 31

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&

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District